

MODIS IOT Weekly Report

Mission Operations Days: 2000/189 to 2000/196

July 7, 2000 20:00:00 GMT to July 14, 2000 20:00:00 GMT

Terra Spacecraft and MODIS Instrument Status:

Terra (AM-1) is in Normal Mode

MODIS is in Science Mode

MODIS has an anomaly with the LWIR focal plane. See description below.

Blackbody	A On; B Off	Nominal
Calibration Electronics	A On; B Off	Nominal
Control Processor	A On; B Off	Nominal
Door: Nadir	Unlatched, open	Nominal
Space View	Unlatched, open	Nominal
Solar Diffuser	Unlatched, closed	Nominal
FDDI Formatter	A On; B off	Nominal
FIFO Memory	1 & 2 On; 3 & 4 Off	Nominal
Format Processor	A On; B off	Nominal
PC FPA	A On	Nominal
Power Supply:1	On	Nominal
2	Off	Nominal
PV FPAs: VIS	A On	Nominal
NIR	A On	Nominal
SMIR	A On	Nominal
LWIR	A On	Nominal
Radiative Cooler:		
Outgas Heaters	Off	Nominal
LWIR FPA Heater	Off	Nominal
SMIR FPA Heater	Off	Nominal
Scan Assembly	A On; B off	Nominal
SDSM	Off	Nominal
SRCA	Off	Nominal
Survival Heaters: PS1	Enabled	Nominal
PS2	Enabled	Nominal
Timing Generator	A On; B Off	Nominal
Flight Software	Rev BD	Nominal
Inhibit Ids Set	None	Nominal
TMONs enabled	66,67	Nominal

This Week's Completed MODIS Activities:

Saturday, July 8, 2000

None

Sunday, July 9, 2000

None

Monday, July 10, 2000

192/20:02:00 ATC - Blackbody to 270K

Tuesday, July 11, 2000

193/14:02:00 ATC Blackbody to 315K

193/14:00:00 Real-time Set Blackbody duty cycle to 100%

193/21:00:00 ATC Blackbody to 270K

193/21:30:00 Real-time Set Blackbody duty cycle to 33%

Wednesday, July 12, 2000

194/14:40-14:45 Real-time Band 27 Gain changes from MCST

194/14:45 Real-time Dump Gain Table

194/19:00:00 ATC Blackbody to 290K

194/21:00:00 – 21:37:13 ATC Load - OA25: SRCA 1W Spatial w/Sector Rotation,
the BC and ND Filter

194/22:45:00 – 23:22:13 ATC Load - OA25: SRCA 10W Spatial w/ Sector Rotation
and Spectral Slit, the BC and ND Filter

Thursday, July 13, 2000

None

Friday, July 14, 2000

196/16:15:50 Real-time Turn off LWIR Heater

This Week's Scheduled MODIS Activities Not Completed:

None

Upcoming MODIS Events:

Saturday, July 15, 2000

None

Sunday, July 16, 2000

None

Monday, July 17, 2000

199/?? Real-time Open SVD 100 steps further

199/20:02:00 ATC - Blackbody to 270K

Tuesday, July 18, 2000

200/14:00:00 ATC Blackbody to 315K

200/14:?? Real-time Set Blackbody duty cycle to 100%
200/21:00:00 ATC Blackbody to 270K
200/21:?? Real-time Set Blackbody duty cycle to 33%

Wednesday, July 19, 2000
201/19:00:00 ATC Blackbody to 290K

Thursday, July 20, 2000
None

Friday, July 21, 2000
Roll maneuver from 12:14:08 to 12:19:38 (not scheduled yet)

Maneuvers:

Friday, July 21, 2000 - MODIS Roll Maneuver (2000/203/12:07:22 – 12:25:24)

MODIS Anomalies:

The Radiative Cooler has negative margin, therefore the cold focal planes are no longer under thermal control. This affects bands 5, 6, 7, and 20-36. Analysis is underway. Solar Diffuser Door operations are suspended during this analysis.

Current maximum and minimum temperature ranges of the LWIR FPA:

Thursday, July 13, 2000:

195/max = 83.859K

195/min = 83.648K

General Instrument Comments:

MODIS is in Science Mode on the A-side with the SVD and NAD open.

The new gain values for Band 27 are as follows:

Detector 1 - 238

Detector 2 - 219

Detector 3 - 231

Detector 4 - 238

Detector 5 - 238

Detector 6 - 238

Detector 7 - 238

Detector 8 - 238

Detector 9 - 238

Detector 10 - 238

MODIS Telemetry Trends:

See MODIS Anomalies section.

Non-MODIS Significant Events:

Monday, July 17 (Day 199) the EOS Operations Center will be switching to the upgraded on-line operations software build, Rev C. They will also be upgrading to Project Database (PDB) 28. The MODIS IOT has reviewed these upgrades and is ready for the switchover.

Data processing by EDOS is currently running at a "degraded level". For a detailed summary of the events that have affected their products, view the EOS System Status web page (<http://jupiter02.gsfc.nasa.gov:591/sysstat/>) and select the EDOS summary link at the top of the page. A key item to note is from day 6/27/2000 at 12:11:19 PM: " The second major issue is the amount of data that EDOS is receiving since ASTER has been fully turned on." With the new, higher data output of ASTER, even less "spare" time will be available to EDOS for the processing of backlogged or reprocessing of data.

Limited Life Item Status:

SRCA 10W Lamp #1: 170.4 of 500 hours
SRCA 10W Lamp #2: 134.3 of 500 hours
SRCA 10W Lamp #3: 143.5 of 500 hours
SRCA 10W Lamp #4: 61.5 of 500 hours

SRCA 1W Lamp #1: 555.6 of 4000 hours
SRCA 1W Lamp #2: 276.3 of 4000 hours

Solar Diffuser Door: 1381 of 3022 Movements
Nadir Aperture Door: 532 of 1316 Movements
Space View Door: 437 of 1316 Movements